

NOTEWORTHY GRASSES FROM MEXICO VII.

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la Determinacion Regional de los
Coeficientes de Agostadero
A.P.D.O. Postal 284, Hermosillo,
Sonora, Mexico

For previous papers see Phytologia 27 (6):441-444, Jan. 1974; Phytologia 28 (4):313 - 318. Aug. 1974; Phytologia 30 (5):344 - 348, March 1975; Phytologia 35 (3):221 - 223, Feb. 1977; Phytologia 37 (4):317 - 407. Oct. 1977; Phytologia 38 (3):173 - 176, Jan. 1978.

Capillaria as a Section of Panicum was established by A.S.Hitchcock and A. Chase, 1910, The North American Species of Panicum. Contrib. United States National Herbarium 15: 1 - 396.

Annuals with many-flowered and more or less diffuse panicles; spikelets pointed, glabrous, the first glume large and clasping; caryopsis falling free, smooth and shining, usually olive brown. Species primarily North American.

Recently Beetle, 1977, in Phytologia 35: 221. discussed Panicum decolorans HBK and the reasons for considering P. parcum a synonym.

Panicum miliaceum L. is an Old World species commonly introduced in North America.

Panicum capillare L. is the most common and most commonly collected of a group of species centered in the eastern United States. These are in part characterized by panicles which break away at maturity and roll before the wind. Included here are P. flexile (Gattinger) Scribn., P. gattingeri Nash, and P. philadelphicum Bernh.

Finally the Section Capillaria contains species centered in northwestern Mexico in which the panicles do not break away at maturity. Traditionally four species have been recognized (P. hirticaule Presl, P. sonorum Beal, P. stramineum H. & C., and P. pampinosum H. & C.) but after a close study in the field the conclusion is reached that only one species is present although four varieties are recognizable. It appears that a fifth variety is confined to the Galapagos Islands. The Mexican varieties are keyed as follows:

Leaves cordate clasping at base, more than 1 cm. broad;
enlarged panicle often drooping

Nodes and sheaths glabrous P. hirticaule
var. stramineum

Nodes and sheaths hirsute P. hirticaule
var. miliaceum

Leaves not cordate clasping, less than 1 cm. broad,
the panicles erect

Sheaths hirsute; plants sparingly branching at
the base; the terminal panicle often remote
and enlarged

P. hirticaule
var. hirticaule

Sheaths glabrous; plants freely branching from
the base; all panicles similar

P. hirticaule
var. pampinosum

Panicum hirticaule Presl var. hirticaule

P. hirticaule Presl, Rel. Maenk. 1:308. 1830.

P. capillare L. var. glabrum Vasey ex Brandeg. Proc.
Calif. Acad. II 2:211. 1889, nomen nudum.

P. capillare L. var. hirticaule (Presl) Gould, Madrono
10:94. 1949.

Plants erect, sparingly branched, 15 to 70 cm. tall; culms, nodes and sheaths papillose-hispid, but sometimes sparingly so; blades rarely exceeding 1 cm. in width, not cordate at base, sparsely hispid or nearly glabrous, ciliate toward the base.

Panicles exserted, 5 to 15 cm. long, scarcely one-third the entire height of the plant, often a terminal panicle remote and larger than the laterals, branches ascending, the lower narrowly so, bearing rather short-pedicelled spikelets along half to two-thirds their length, the glabrous pulvini inconspicuous; spikelets 2.7 to 3.3 mm. long, 1 to 1.1 mm. wide; spikelets typically reddish brown; first glume half to three-fourths the length of the spikelet; second glume slightly longer than the sterile lemma; the palea small; achene 2 mm. long, a scar sometimes showing on either side at base.

Rocky or sandy soil, Texas to southern California south through Mexico to Nicaragua.

Of this group centered in northwestern Mexico Panicum hirticaule Presl, described from the State of Guerrero, is the earliest name available. According to Hitchcock and Chase (1910) the type collection "represents the medium form of the species, with nearly simple culms, narrowly ascending lower panicle branches and reddish brown spikelets 3 mm. long." This variety is common throughout Mexico.

Panicum hirticaule Presl var. miliaceum (Vasey) comb. Nov.

P. capillare L. var. miliaceum Vasey, Contr. U. S. Nat. Herb. 1:28. 1890.

P. sonorum Beal, Grasses N. Amer. 2:130. 1896.

Robust; culms erect, branching, reported to be 1 m. tall; culms, nodes and sheaths hirsute and blades usually pubescent; blades 15 - 30 cm. long, often 2 cm. wide, ~~cordate~~ clasping at the base.

Panicles diffuse, nodding, with many spikelets, these 3 to 3.3 mm long, 1.1 mm wide, lanceolate, reddish brown; first glume three to five nerved, one half to two thirds as long as the spikelet; second glume and sterile lemma glabrous, seven to eleven nerved, ovate-lanceolate to acuminate; fertile lemma and palea smooth and shining; mature grain about 2 mm. long, globose.

Sonora panic was first described by Vasey in 1890 but given the name Panicum sonorum by Beal in 1896. The original collections were from Sonora and Baja California. Since then the plant has been reported from Chihuahua, Tamaulipas, Nuevo Leon, Tabasco, Sinaloa, Oaxaca, Veracruz and Chiapas in Mexico; also in Arizona and El Salvador.

Its apparent habitat is corn fields and barrancas. Its forage value fortuitous whenever it rains. Sonoran panic (also called sauwi) is reported to have been an indian crop plant of the Cocopa and Wariho tribes. While it seems doubtful that ground was cultivated for this species alone, apparently when land was disturbed for other purposes such as a corn field Sonora panic was a welcome and aggressive weed.

Panicum hirticaule Presl var. pampinosum (H. & C.)
comb. nov.

Panicum pampinosum Hitchc. & Chase, Contrib. U. S.
Nat. Herb. 15: 66. f. 48. 1910.

Panicum capillare L. var. pampinosum (H. & C.) Gould,
Madrono 10:94. 1949.

Short, 2 - 4 dm. tall, freely branching from the base; culms ascending from a decumbent base, branching at the lower and middle nodes, compressed, glabrous, or sparsely pilose below the panicle, the nodes pubescent; sheaths loose, glabrous; ligules of very stiff hairs 2 to 3 mm. long; blades 3 to 10 cm. long, 3 to 6 mm. wide, flat, scarcely narrowed at the base.

Panicles all alike, exserted, 6 to 15 cm. long, half to two-thirds as wide, the branches solitary, the lower as much as 5 to 8 cm. long, stiffly ascending with rather crowded short-pedicelled spikelets about 3 to 4 mm. long, 1.4 mm. wide, very turgid, pointed, typically greenish; first glume more than threefourths the length of the spikelet; second glume and sterile lemma subequal, exceeding the caryopsis; palea short; achene 2.2 mm. long.

Known from New Mexico and Arizona;
the most common variety of P. hirticaule in
Baja California, Mexico, and frequent in Sonora.

Panicum hirticaule Presl var. stramineum (H. & C.)
comb. nov.

Panicum stramineum Hitchc. and Chase, Contrib.
U. S. Nat. Herb. 15: 67, f. 50. 1910.

Panicum capillare L. var. stramineum (H.&C)
Gould, Madrono 10:94. 1949.

Plants ascending, sparingly branched,
2 to 5 dm. tall; glabrous; blades 10 to 30 cm. long,
10 to 15 mm. wide, cordate clasping at the base.

Panicles few, finally exserted, ovoid in
outline; spikelets 3 to 4 mm. long, 1.5 mm. wide,
elliptic, abruptly acuminate, when mature pale
stramineous; first glume one third the length of
the spikelet; second glume and lemma equal.

The type is from Guaymas, Sonora, Mexico.
The plant has also been reported from southern
Arizona and from Sinaloa.